

### AUTOHEMOTHERAPY IN THE CLINICAL MANAGEMENT OF CUTANEOUS PAPILOMATOSIS IN A COW : A CASE REPORT

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Papilloma virus is a non enveloped double stranded DNA virus, epitheliotropic, host specific and cause proliferative lesions in many Mammalian and Avian species. Although infection with papilloma virus occur in many species, only those which affect cattle, horses and dogs are of clinical significance (Quinn *et al.* 2007). Papilloma virus usually affects basal cells of squamous epithelium. As a result of minute abrasions, they may also gain entry at the vulnerable sites such as junctions between different types of epithelia. Bovine cutaneous papillomatosis is caused by several types of bovine papilloma virus. Cutaneous fibro papillomas are generally associated with BPV types 1,2 & 5 whereas BPV type 3 or 6 are linked to papillomas in which fibrous tissue is minimal. Teat fibro papillomas associated with BPV-5 infection have smooth surface and are called rice grain type whereas those associated with BPV-6 are called frond type. Lesions are most commonly observed in young animals and regress spontaneously after weeks or months. Regression is attributed to the development of cell mediated immunity (Quinn *et al.* 2007) .

#### CASE HISTORY AND OBSERVATION

A four year old crossbred cow was presented to Veterinary Dispensary, Somanahalli, Bengaluru. with a history of multiple nodular masses which originated on the teats and were later appreciated on the neck and around the eyes. The animal evinced pain while milking as per owner's history. On clinical examination, the animal had a temperature of 103 °F with congested mucus membranes and cauliflower like papillomatous growth on the lateral aspect of the neck and around the eyes. Many ulcerated warts were also found on all the four teats. Since the lesions were present throughout the body, cryosurgery and topical medications was not preferred in this case. A decision was made to treat the animal using autohemotherapy.



Photo 1: Cow showing ulcerated teat papilloma



Photo 2: Cauliflower like mass on the lateral aspect of the neck

## TREATMENT AND DISCUSSION

Twenty ml of venous blood was drawn from the jugular vein puncture and 10 ml was injected at both sides of the neck subcutaneously. The treatment was repeated at weekly intervals for four weeks. The animal showed excellent response to treatment and the warts started regressing with 90% disappearance by fourth week.

In India BPV -1 & BPV-2 were detected in the cutaneous warts of cattle (Leishangthem *et al.* 2008, Singh *et al.* 2009, and Pangty *et al.* 2010). Kavithaa *et al.* (2014) also reported 92% cure by autohemotherapy, 81% by use of anthiomaline, 70% with oral administration of thuja extract and 57% cure rate with topical application of thuja ointment in Jersey cows infected with warts. Ganesh Hedge (2011) and Chetan Kumar (2011) have also reported the use of autohemotherapy for treatment of Bovine papilloma. The use of autogenous vaccine at 1-2 week



**Fig. 3: Same cow showing regression of lesions following four weeks of autohemotherapy**

interval is reported to result in 80-85% recovery rate whereas only 33% recovery rate was reported when warts were on teats and response of low, flat, sessile warts to vaccination has been reported to be poor according to Radostits *et al.* (1994). However no suitable commercial vaccine is available for field use. Further the vaccine unavailability and aseptic preparation of vaccine limits this treatment. Hence autohemotherapy can be a useful alternative therapy as was proven in the present case.

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